

CLAIMS:

1. An RFID tag for use as a tamper-evident seal, including an RFID transponder having an integrated circuit chip and an antenna connected to the integrated circuit chip, the RFID transponder being able, when intact, to  
5 communicate with an RFID interrogator device,  
wherein the RFID tag has a line of weakness extending across at least a portion of the antenna or between the antenna and the integrated circuit chip, such that when the tag is broken along the line of weakness the RFID transponder is rendered unable to communicate with the RFID interrogator device.
- 10 2. An RFID tag according to claim 1 further including an adhesive coating applied to an outer surface thereof, to enable the tag to be affixed to an article.
3. An RFID tag according to claim 1 or 2 wherein the RFID transponder further includes a supporting substrate upon which the integrated circuit chip and antenna are mounted.
- 15 4. An RFID tag according to claim 2 or 3 further including a first web of flexible material, with which the transponder is integrated, and wherein the adhesive coating is applied to an outer surface of the first web of flexible material.
5. An RFID tag according to claim 4 further including a second web of flexible material, wherein the transponder is disposed between the first and second webs  
20 of flexible material in a laminar structure.
6. An RFID tag according to claim 5 wherein the first and second webs of flexible material are made of paper.
7. An RFID tag according to claim 5 wherein the first and second webs of flexible material are made of plastic.
- 25 8. An RFID tag according to any one of the claims 1 to 7 wherein the line of weakness includes a line of perforations.

9. An RFID tag according to any one of the claims 1 to 8 wherein the RFID transponder is a passive RFID transponder.

10. An RFID tag according to any one of the claims 5 to 9 when appended to claim 5 wherein the line of weakness is provided in the first and/or the second web of flexible material.

11. An RFID tag according to any one of the claims 1 to 10 further including one or more additional lines of weakness, each of which extends across at least a portion of the antenna or between the antenna and the integrated circuit chip, such that when the seal tag is broken along any one or more of the lines of weakness the RFID transponder is rendered unable to communicate with the RFID interrogator device.

12. An RFID tag according to any one of the claims 1 to 11 wherein the antenna is a coil antenna.

13. A method for sealing a package in order to enable the detection of unauthorised access to the contents of the package, including the steps of:  
providing an RFID tag in accordance with any one of claims 1 to 12; and  
affixing the RFID tag to the package, such that the line of weakness of the tag is aligned with a line of opening of the package,  
whereby, when the package is opened along said line of opening, the tag is broken along said line of weakness.

14. A method according to claim 13 wherein the RFID tag includes an adhesive coating applied to an outer surface thereof, and the tag is affixed to the package by means of said adhesive coating.

15. A method for sealing a package in order to enable the detection of unauthorised access to the contents of the package, including the steps of:  
providing a plurality of RFID tags in accordance with any one of claims 1 to 12; and

affixing the plurality of RFID tags to the package, such that the lines of weakness of the tags are aligned with one or more lines of opening of the package,

whereby, when the package is opened along any one or more of said lines of opening, at least one of the tags is broken along the line of weakness of the tag.

16. A method for detecting unauthorised tampering with, or removal of, an article stored within a container, including the steps of:

providing an RFID tag in accordance with any one of claims 1 to 12;  
10 affixing the RFID tag to the article;  
storing the article within the container;  
subsequently interrogating the RFID tag using an RFID interrogator device;  
and

detecting unauthorised tampering with, or removal of, the article by a failure  
15 of the RFID tag to respond to the RFID interrogator device.

17. A method according to claim 16 further including the step of providing identifying information stored within the RFID tag prior to storing the article within the container, and wherein the step of interrogating the RFID tag includes reading the identifying information from the RFID tag and the step of detecting  
20 unauthorised tampering includes detecting whether the identifying information has changed since the article was stored within the container.

18. A method according to claim 17 wherein the identifying information is transmitted electronically from a first location at which the article is stored within the container to a second location at which the RFID tag is interrogated, and  
25 detecting whether the identifying information has changed includes comparing the electronically transmitted identifying information with the identifying information read from the RFID tag.

19. A method according to any one of claims 16-18 wherein the RFID tag includes an adhesive coating applied to an outer surface thereof, and the tag is  
30 affixed to the article by means of said adhesive coating.

20. A method according to any one of claims 16 to 19 wherein the article is contained within a package, and the step of affixing the RFID tag to the article includes affixing the RFID tag to the package such that the line of weakness of the tag is aligned with a line of opening of the package, such that when the package  
5 is opened along said line of opening, the tag is broken along said line of weakness.

21. A method for detecting unauthorised tampering with, or removal of, an article stored within a container, including the steps of:  
providing a plurality of RFID tags in accordance with any one of claims 1 to  
10 12;  
affixing the plurality of RFID tags to the article;  
storing the article within the container;  
subsequently interrogating the plurality of RFID tags using an RFID  
interrogator device; and  
15 detecting unauthorised tampering with, or removal of, the article by a failure  
of one or more of the RFID tags to respond to the RFID interrogator device.